

**CLAIMS:**

1. A method for controlling a node in a network comprising:  
storing a network identifier indicative of the network which the node is associated with;  
receiving messages from other nodes and extracting network identifiers from said messages indicative of the network which the sending node is associated with;  
comparing the received network identifier with the stored network identifier; and  
carrying out a duplicate address detection process where the stored network identifier is different to the received network identifier.
2. A method according to claim 1 wherein said duplicate address detection process includes sending an address request message for reception by other nodes, wherein said address request message includes a flag to indicate that the duplicate address detection process being carried out by the node is as a result of the received network identifier being different to the stored network identifier.
3. A method according to claim 1 further comprising receiving an address request message transmitted from a second node and determining whether such message includes a flag to indicate that a duplicate address detection process is being carried out by the second node as a result of the second node having received a network identifier different to a network identifier stored by it.
4. A method according to claim 3 further comprising initiating a duplicate address detection process in response to the receipt of an address request message including said flag.
5. A method according to claim 4 wherein the start of the duplicate address detection process is deferred for a period of time.
6. A method according to claim 5 wherein the period of time is determined at random.

7. A method according to claim 4 wherein after a duplicate address detection process has been initiated in response to the receipt of an address request message including said flag, address request messages which are received for a period of time thereafter do not initiate a duplicate address detection process.
8. A method according to claim 3, further comprising retransmitting received address request messages for reception by other nodes.
9. A method according to claim 8, further comprising:
  - noting the receipt of an address request message and storing a record of the address of the node from which the message originated and
  - preventing retransmission of address request messages where an address request message originating from the same node has already been forwarded.
10. A method according to claim 1, further comprising obtaining the network identifier from a message received from another node.
11. A method according to claim 1, further comprising generating the network identifier itself.
12. A method according to claim 11 further comprising waiting for a predetermined period of time to establish if any messages containing a network identifier are received from another node and if no such message is received carrying out the generating step.
13. A terminal for connecting to a network to form a node comprising:
  - a memory for storing a network identifier indicative of the network which the node is associated with;
  - a receiver for receiving messages from other nodes and extracting from said messages a network identifier indicative of the network which the sending node is associated with;
  - a comparator for comparing a received network identifier with the stored network identifier; and

a controller for carrying out a duplicate address detection process where the comparator indicates that the stored network identifier is different to the received network identifier.

14. A terminal according to claim 13 wherein, during said duplicate address detection process, said controller sends an address request message for reception by other nodes, wherein said address request message includes a flag to indicate that the duplicate address detection process being carried out by the controller is as a result of a received network identifier being different to the stored network identifier.

15. A terminal according to claim 13 wherein said receiver additionally monitors received messages to determine if an address request message transmitted from a second node is received which includes a flag to indicate that a duplicate address detection process is being carried out by the second node as a result of the second node having received a network identifier different to a network identifier stored by it.

16. A terminal according to claim 15 wherein said controller initiates a duplicate address detection process in response to the receipt of an address request message including said flag.

17. A terminal according to claim 16 wherein the start of the duplicate address detection process is deferred for a period of time.

18. A terminal according to claim 17 wherein the period of time is determined at random.

19. A terminal according to claim 16 wherein after a duplicate address detection process has been initiated by said controller in response to the receipt of an address request message including said flag, said controller inhibits the initiation of any further duplicate address detection process in response to address request messages received for a period of time thereafter.

20. A terminal according to claim 15, further comprising

a transmitter for retransmitting received address request messages for reception by other nodes.

21. A terminal according to claim 20, wherein  
said memory is also adapted to store a record of the address of the node from which an address request message originated and wherein  
said transmitter is inhibited from retransmitting received address request messages where an address request message originating from the same node has already been received and stored in said memory.
22. A terminal according to claim 13, further comprising  
an extractor for obtaining a network identifier from a message received from another node and storing the network identifier in the memory.
23. A terminal according to claim 13, further comprising  
a generator for generating a network identifier and storing the network identifier in the memory.
24. A terminal according to claim 13, further comprising:  
an extractor for obtaining a network identifier from a message received from another node and storing the network identifier in the memory; and  
a generator for generating a network identifier, wherein the generator waits for a predetermined period of time to establish if the extractor has received any messages containing a network identifier and if no such message is received generates a network identifier and stores the network identifier in the memory.
25. A method of forming an IPv6 address for use by a terminal forming a node in an ad hoc network comprising:  
using a site-local prefix to form the prefix of the address;  
generating a random number as a subnet identifier;  
obtaining a predetermined terminal identifier address; and

forming said address by appending the subnet identifier to the end of the prefix and appending the terminal identifier address to the end of the combined prefix and subnet identifier.

26. A method according to claim 25 wherein the prefix is a 10-bit site-local prefix followed by a 38-bit zero string..
27. A method according to claim 26 wherein the prefix is FEC0::/48.
28. A method according to claim 25 wherein the subnet ID is a 16-bit random number.
29. A method according to claim 25 wherein the terminal identifier address is a 64-bit number based upon one of: the terminal's EUI-64 address and the terminals MAC address.